

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: PEQUAWKET POND	Lake Area (ha): 57.79
Town: CONWAY	Maximum depth (m): 16.5
County: Carroll	Mean depth (m): 3.9
River Basin: Saco	Volume (m <sup>3</sup> ): 2236500
Latitude: 43°58'12" N	Relative depth: 1.9
Longitude: 71°08'28" W	Shore configuration: 3.71
Elevation (ft): 458	Areal water load (m/yr): 71.70
Shore length (m): 10000	Flushing rate (yr <sup>-1</sup> ): 18.50
Watershed area (ha): 7096.6	P retention coeff.: 0.29
% watershed ponded: 1.7	Lake type: natural w/dam

BIOLOGICAL:

		7 February 1994	5 August 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	RHIZOSOLENIA 45%
	#2		CHRYSOSPHAERELLA 15%
	#3		UROGLENOPSIS 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)			765
CHLOROPHYLL-A (µg/L)			2.01
DOM. ZOOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	NAUPLIUS LARVA 25%
	#2		KERATELLA 18%
	#3		
ROTIFERS/LITER		11	20
MICROCRUSTACEA/LITER		4	37
ZOOPLANKTON ABUNDANCE (#/L)		15	67
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			4.8
BOTTOM DISSOLVED OXYGEN (mg/L)		8.4	0.4
BACTERIA (E. coli, #/100 ml)	#1		3
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	5.2
Hypolimnion volume (m <sup>3</sup> ):	642000
Anoxic volume (m <sup>3</sup> ):	70000

**CHEMICAL:**

Lake: PEQUAWKET POND  
Town: CONWAY

	7 February 1994		5 August 1993		
DEPTH (m)	4.0	8.0	1.0	5.0	12.0
pH (units)	6.2	6.3	7.1	6.6	6.3
A.N.C. (Alkalinity)	7.2	7.9	7.5	8.7	7.4
NITRATE NITROGEN	0.07	0.11	< 0.02		0.19
TOTAL KJELDAHL NITROGEN	0.17	0.17	0.24	0.70	0.23
TOTAL PHOSPHORUS	0.003	0.004	0.005	0.012	0.010
CONDUCTIVITY ( $\mu$ mhos/cm)	56.3	60.4	59.6	58.4	60.9
APPARENT COLOR (cpu)	19	23	23	23	32
MAGNESIUM			0.45		
CALCIUM			3.7		
SODIUM			6.7		
POTASSIUM			0.54		
CHLORIDE	9	10	10		10
SULFATE	3	3	3		2
TN : TP	80	70	48		42
CALCITE SATURATION INDEX			2.8		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1993**

D.O. S.D. PLANT CHL TOTAL CLASS

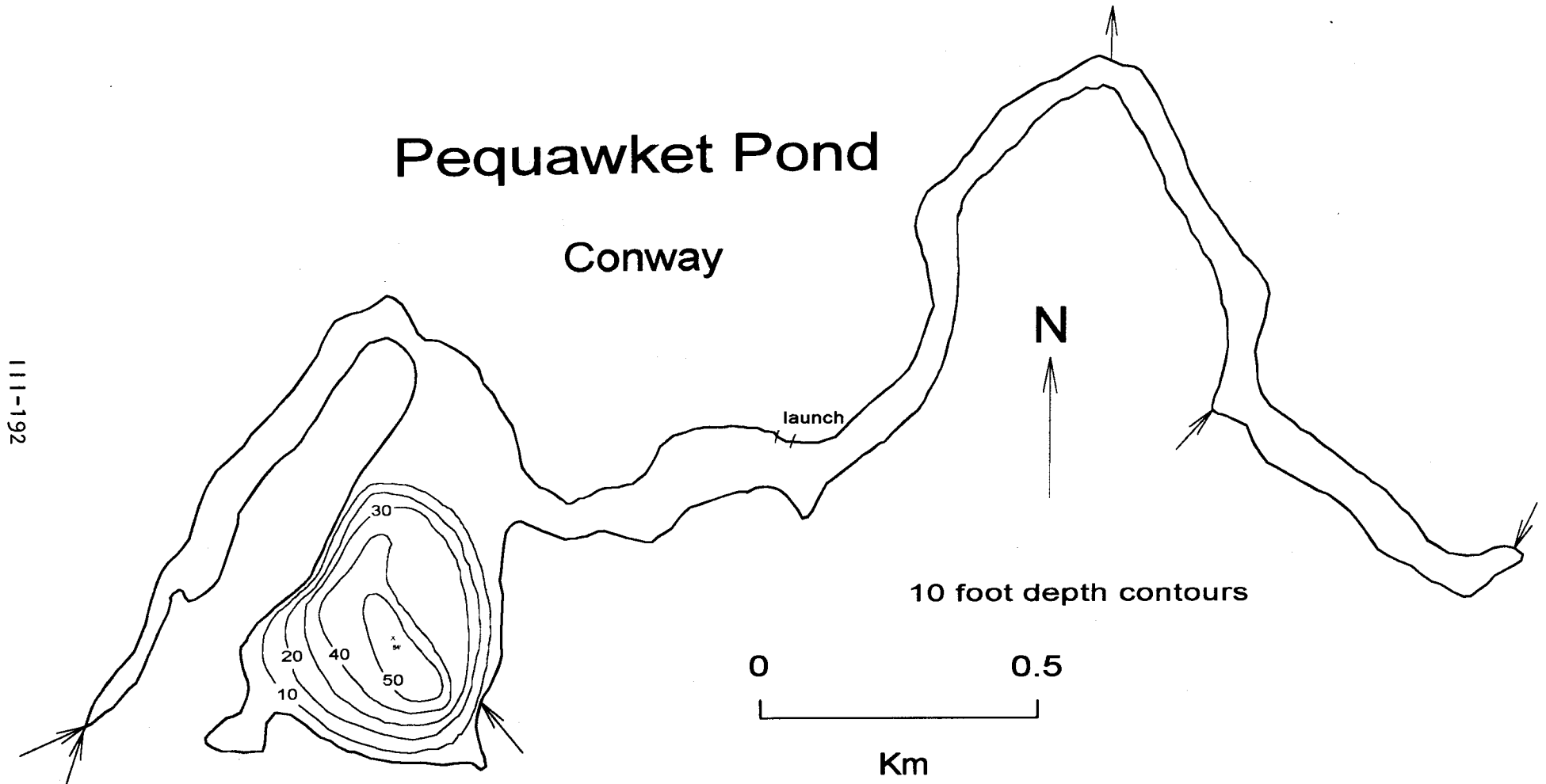
5	2	3	0	10	Meso.
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**COMMENTS:**

1. This pond was previously surveyed and classified in 1981. The trophic rating changed from oligotrophic to mesotrophic. The change was due primarily to a decrease in the bottom dissolved oxygen from 5 to less than 1 mg/L. The 1993 sample was collected later in the summer and at a deeper depth, which may at least partially explain the decrease. Some trophic indicators (water clarity, phosphorus) were actually better in 1993 while others (chlorophyll, vascular plants) remained unchanged between the two dates.
2. This is a uniquely shaped pond, consisting of an open deep area and long, narrow river-like channels.
3. The channels were approximately 5 feet deep; navigation was difficult because of the abundant emergent and submerged plant growth.
4. The blue-green alga Merismopedia was the dominant (25%) genera of wholewater phytoplankton. Greens (40%) and blue-greens (40%) were the dominant classes.

# Pequawket Pond

Conway



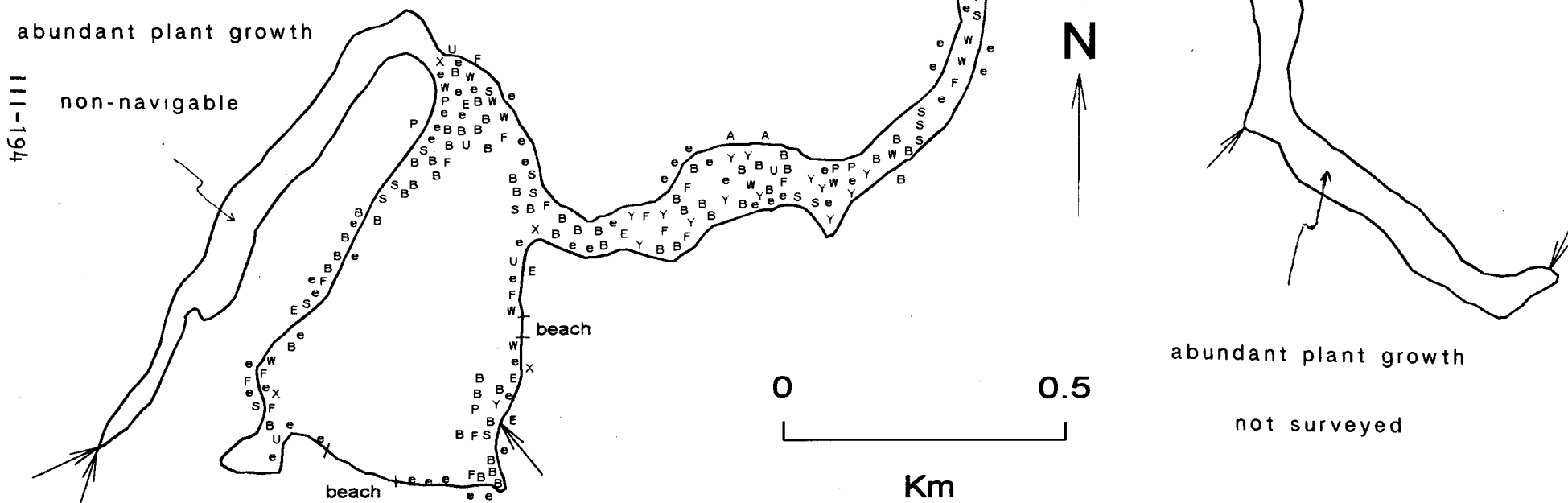
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**COMMENTS :**

**\*Dissolved oxygen values are in mg/L**

# Pequawket Pond

Conway



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